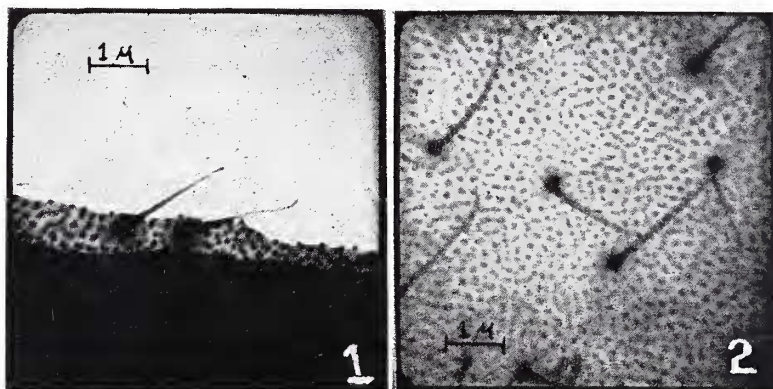


## THE MICROTRICHIAE OF URANOTAENIA.

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The inability of early investigators to detect the presence of small microtrichiae on the wings of uranotine mosquitoes resulted in the establishment of the erroneous taxonomic character "absence of microtrichiae" for the separation of the *Uranotaenia* from other culicine genera. Despite the fact that the presence of uranotine microtrichiae has been established (1, 2)\*, some of the current medical entomological textbooks still persist in including this erroneous character in their consideration of the generic features of mosquitoes. The purpose of this paper is to describe and to provide electron micrographs of these structures as well as other features of the uranotine wing membrane.

Under low magnification, 100 $\times$ , of the light microscope the microtrichiae of *Uranotaenia sapphirina* (O.S.) appear as extremely small closely spaced dots. At higher magnifications, 430 and 970 $\times$ , these dots may be identified as the bases of the microtrichiae and from each there arises a delicate, tapering shaft. With the electron microscope, 7800 $\times$ , it is possible to note that these structures vary in length from 2 to 4 microns and each is characterized by a relatively thick, short basal portion and a thin tapering shaft which terminates in a minute bulbous tip (Figs. 1 and 2). There is no



FIGS. 1 and 2. Electron micrographs of microtrichiae and wing membranes of *Uranotaenia sapphirina* O.S.

\* Numbers refer to Literature Cited.

indication of the annulations on the shafts as reported for *Anopheles quadrimaculatus* Say (3) or *A. albimanus* Wied. (4) nor of the areas of greater thickness or density in the wing membrane contiguous to the bases as may be observed in *A. albimanus*, *Culex pipiens* L. or *Aedes aegypti* L. Although the uranotine microtrichiae are less than one half the size of those of *A. albimanus* and *C. pipiens*, their number in any unit area is nearly twice that of the latter species.

A mottled appearance is imparted to the wing membrane by the presence of numerous small well-defined areas about .06 microns in diameter which are located in both the upper and lower surfaces (Fig. 2). The discrete nature of these areas or dots may be observed particularly well along the torn edges of the wing membranes but it cannot yet be determined whether they represent thickenings or areas of greater density than the general groundwork of the wing. A similar mottling has been observed in the wings of *Wyeomyia smithi* (Coq.) and *C. pipiens* but in these species the areas are not as sharply delimited as in *Uranotaenia*. Discrete areas are present in *A. aegypti* but they are not as distinct and less numerous while in *A. albimanus* these areas are practically absent.

In the species mentioned above, it was observed that a decrease in the mottling of the wing was accompanied by an increase in the size of the areas of greater thickness or density contiguous to the microtrichial bases. It has not been determined if this relationship is correlative or coincidental.

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